Small Business Innovation Research (SBIR) Small Business Technology Transfer (STTR) Overview

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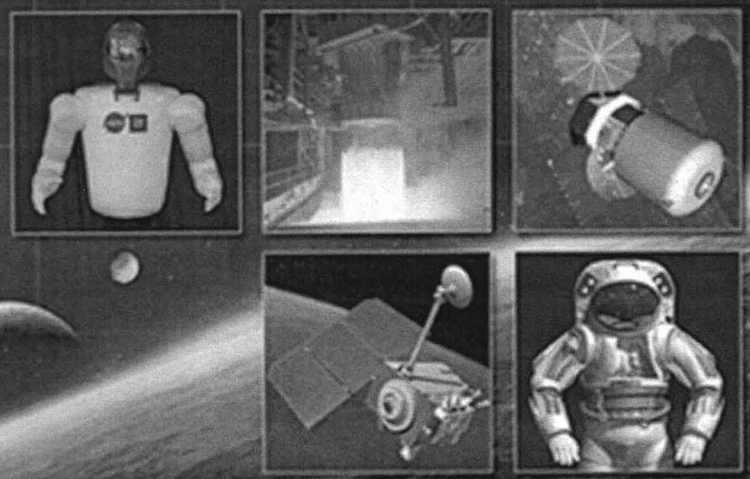
SBIR/STTR Program Specialist




NASA SBIR/STTR Program
• The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs provide an opportunity for small, high technology companies and research institutions (RI) to participate in Government sponsored research and development (R&D) efforts in key technology areas.
If you are a small business concern with 500 or fewer employees, or a non-profit RI, such as a university or a research laboratory with ties to an SBC, then NASA encourages you to learn more about these programs and significant sources of seed funding for the development of your innovations.

Reauthorization of the SBIR and STTR Programs

- The SBIR/STTR programs provide more than $2 billion of R&D funding to innovative small business across a broad range of technologies. After a long series of temporary reauthorizations, Congress voted to reauthorize the program and the President signed the bill into law on December 31, 2011.

- The Small Business Administration (SBA) must translate the laws into more detailed regulations and directives that govern how the program will work and will be administered.


Reauthorization of the SBIR and STTR Programs
• The Agency drafts a proposed rule or amendments to a directive.
• The proposed rule and amendments to the directive are published in the Federal Register and posted on http://www.regulations.gov for a 60-day public comment period. You must submit your comments on or before October 5, 2012.
• The Agency reviews and considers all comments and modifies rules or directives as appropriate.
• The final rule or directive is published, including SBA's response to comments and an effective date.

Reauthorization of the SBIR and STTR Programs

- Section 101- Amends the Small Business Act to reauthorize through FY 2019 the SBIR and STTR programs of the Small Business Administration (SBA).

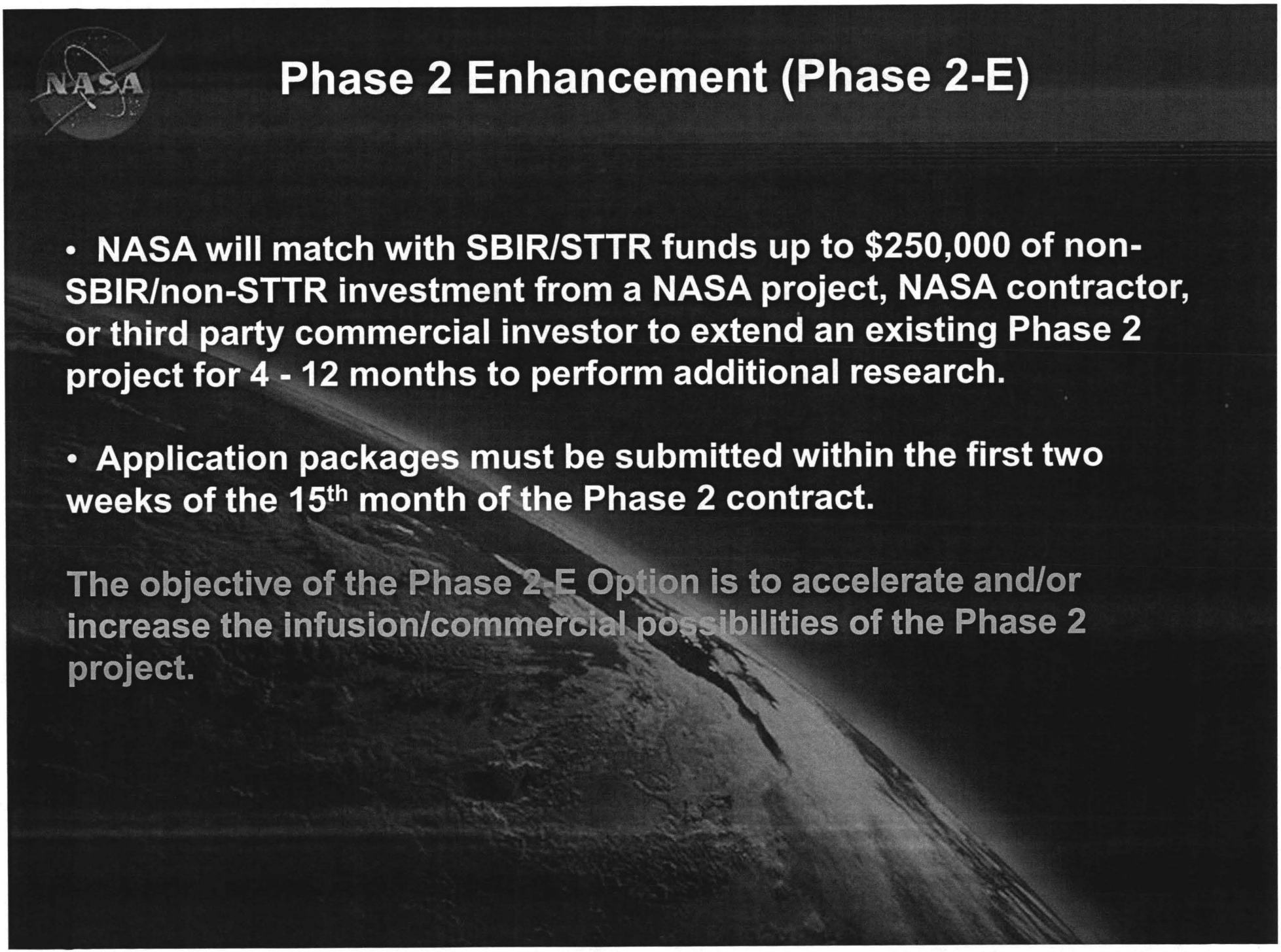
- Section 106- Allows a small business that receives a SBIR award from one agency to receive an award for a subsequent phase from another agency as long as the head of each agency determines that the topics of the relevant awards are the same.

- Section 308-Requires the SBA to include in an annual report to Congress specified information on Phase III awards issued by federal agencies participating in the SBIR/STTR Programs.

- Section 313- Directs the Administrator to amend the SBIR and STTR Policy Directives to include measures to prevent fraud, waste, and abuse in the programs.

SBIR/STTR: 3-Phase Program

- Phase 1
  - Feasibility study
  - $125K award
  - 6 months duration (SBIR)
  - 12 months duration (STTR)
- Phase 2
  - Technology Development of a Prototype
  - 2-Year Award
  - $750K
- Phase 3
  - Technology Infusion/Commercialization Stage
  - Use of non-SBIR Funds
  - Ability to award sole-source contracts without Justification for Other than Full and Open Competition (JOFOC) based on specific SBIR authority – NASA and NASA primes.



Phase 2 Enhancement (Phase 2-E)

- NASA will match with SBIR/STTR funds up to $250,000 of non-SBIR/non-STTR investment from a NASA project, NASA contractor, or third party commercial investor to extend an existing Phase 2 project for 4 - 12 months to perform additional research.

- Application packages must be submitted within the first two weeks of the 15th month of the Phase 2 contract.

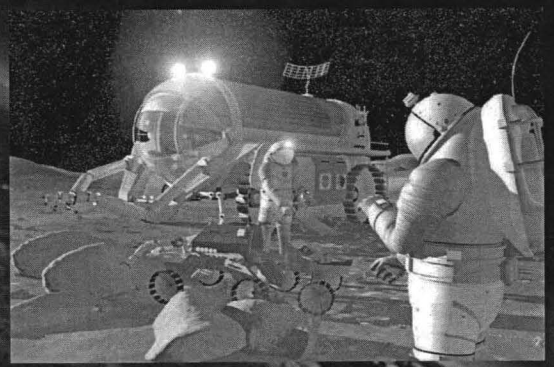
The objective of the Phase 2-E Option is to accelerate and/or increase the infusion/commercial possibilities of the Phase 2 project.

Mission Driven

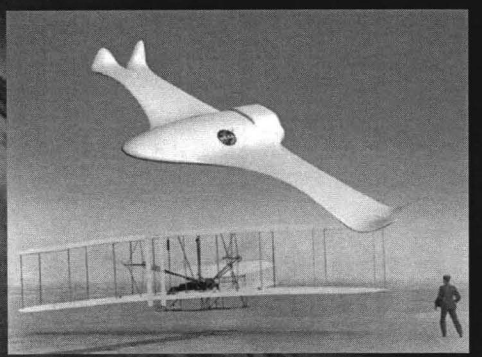
SBIR/STTR = Small Business Innovation for NASA and the Nation

Partnership with Mission Directorates Drives SBIR/STTR Investment

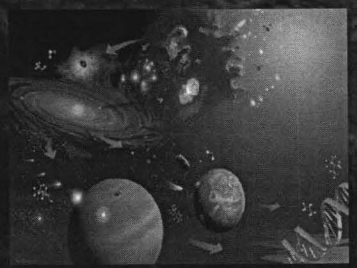
Human Exploration and Operations



Aeronautics Research



Science



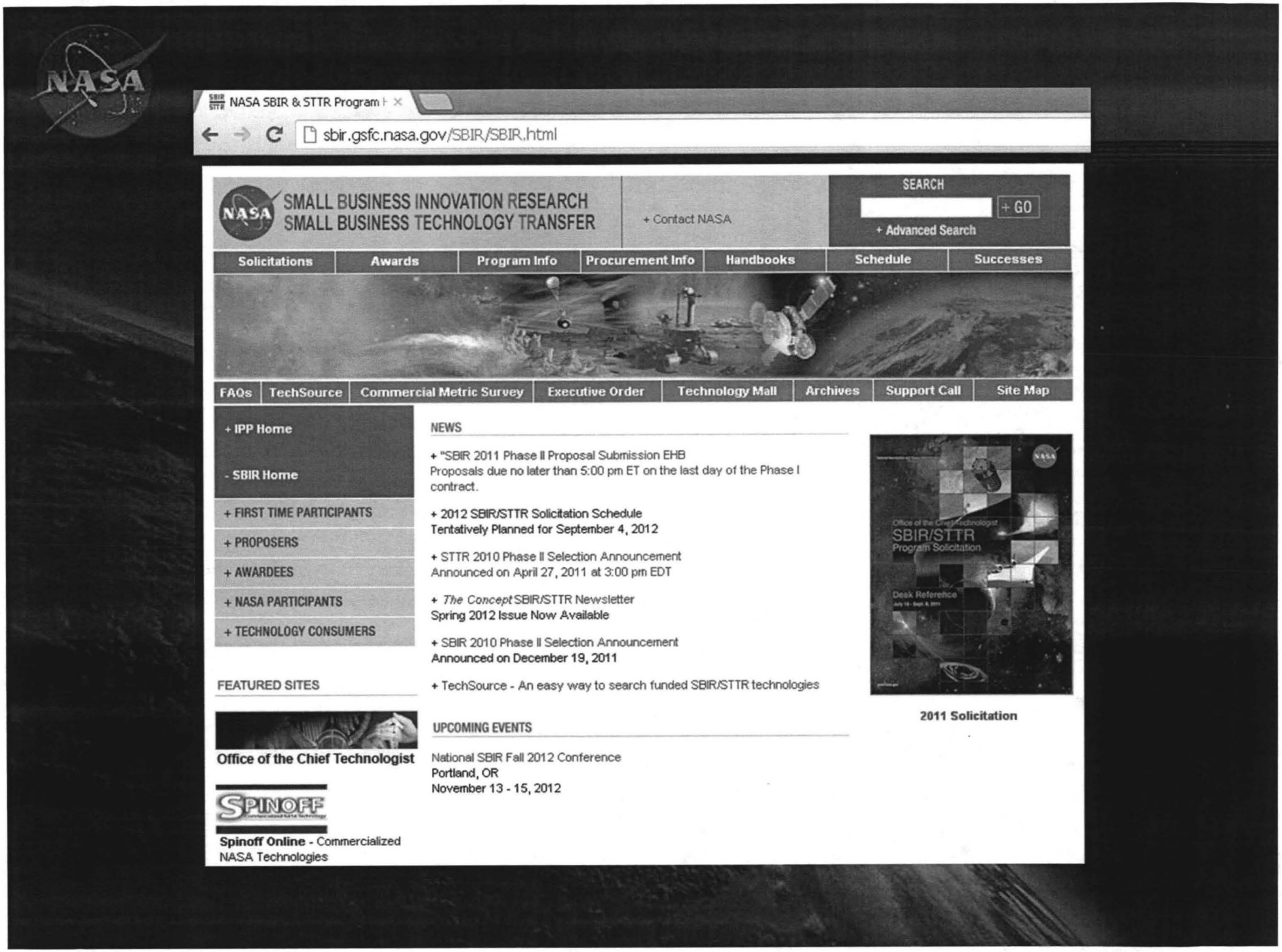
FAQs

- **Does my proposal need to fit into a specific subtopic?**

  Yes, proposals that do not address the solicitation may be classified as "non-responsive" and rejected. However, the subtopics are usually broadly written.

- **Is NASA interested in my technology?**

  Review this year's solicitation for potential areas of interest at www.sbir.nasa.gov


NASA SBIR & STTR Program
sbir.gsfc.nasa.gov/SBIR/SBIR.html
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Executive Order
Technology Mall
Archives
Support Call
Site Map
+ IPP Home
- SBIR Home
+ FIRST TIME PARTICIPANTS
+ PROPOSERS
+ AWARDEES
+ NASA PARTICIPANTS
+ TECHNOLOGY CONSUMERS
NEWS
+ "SBIR 2011 Phase II Proposal Submission EHB
Proposals due no later than 5:00 pm ET on the last day of the Phase I contract.
+ 2012 SBIR/STTR Solicitation Schedule
Tentatively Planned for September 4, 2012
+ STTR 2010 Phase II Selection Announcement
Announced on April 27, 2011 at 3:00 pm EDT
+ The Concept SBIR/STTR Newsletter
Spring 2012 Issue Now Available
+ SBIR 2010 Phase II Selection Announcement
Announced on December 19, 2011
+ TechSource - An easy way to search funded SBIR/STTR technologies
SBIR/STTR
Program Solicitation
Desk Reference
2011 Solicitation
FEATURED SITES
Office of the Chief Technologist
SPINOFF
Spinoff Online - Commercialized NASA Technologies
UPCOMING EVENTS
National SBIR Fall 2012 Conference
Portland, OR
November 13 - 15, 2012

SBIR/STTR Funded Technology Search

SMALL BUSINESS INNOVATION RESEARCH
SMALL BUSINESS TECHNOLOGY TRANSFER

Putting Innovative Technologies to Work

NASA TechSource

Return to NASA SBIR Home | Help

Search Text: ( ) Any Word ( ) All Words ( ) Exact match ( ) Advanced Tips for Advanced Search!

Center: Awarding Center Program: Both Program Year: All Phase: Any Results Per Page: 10 Sort By: Relevance Search

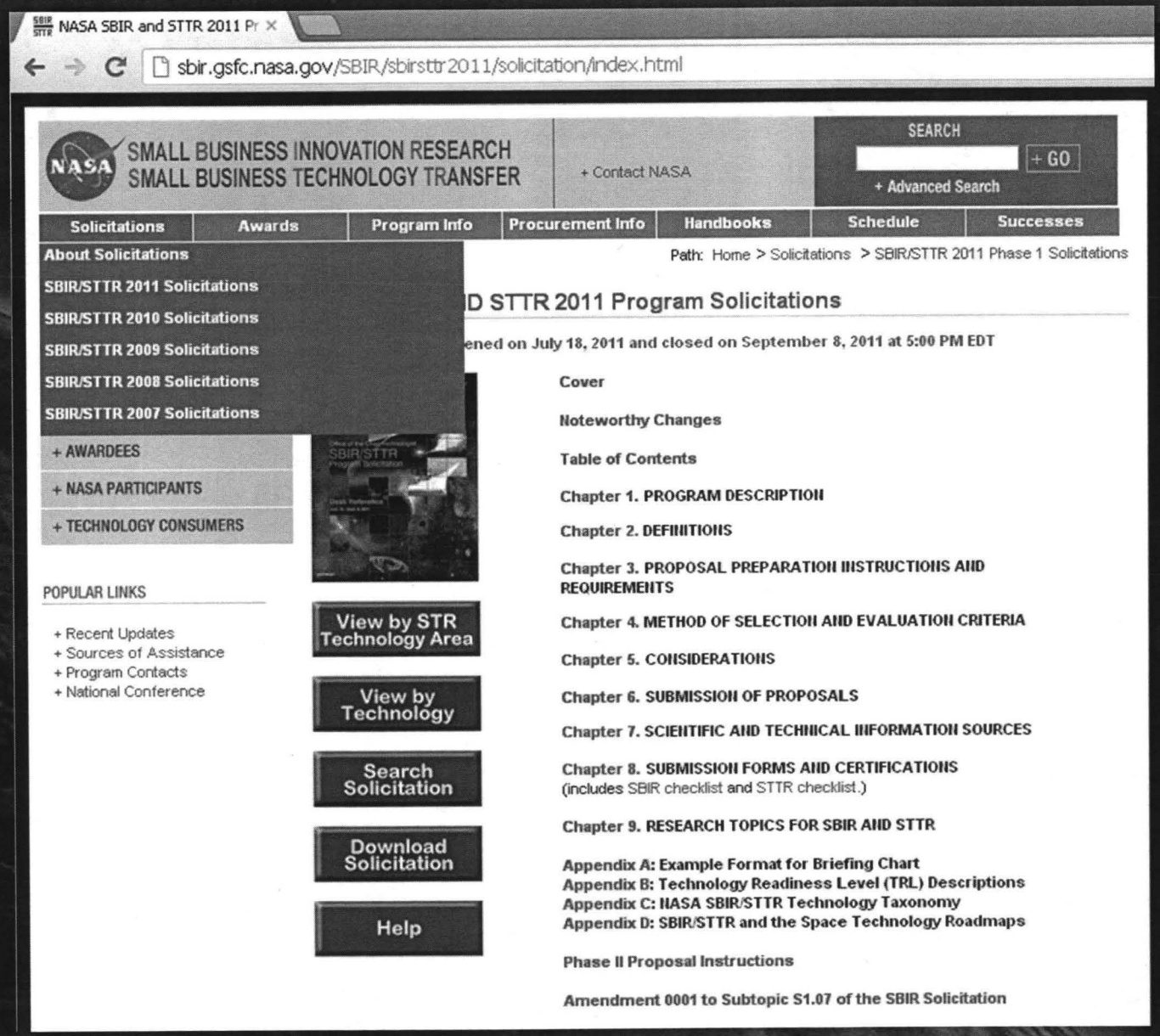
Welcome to NASA TechSource Tool

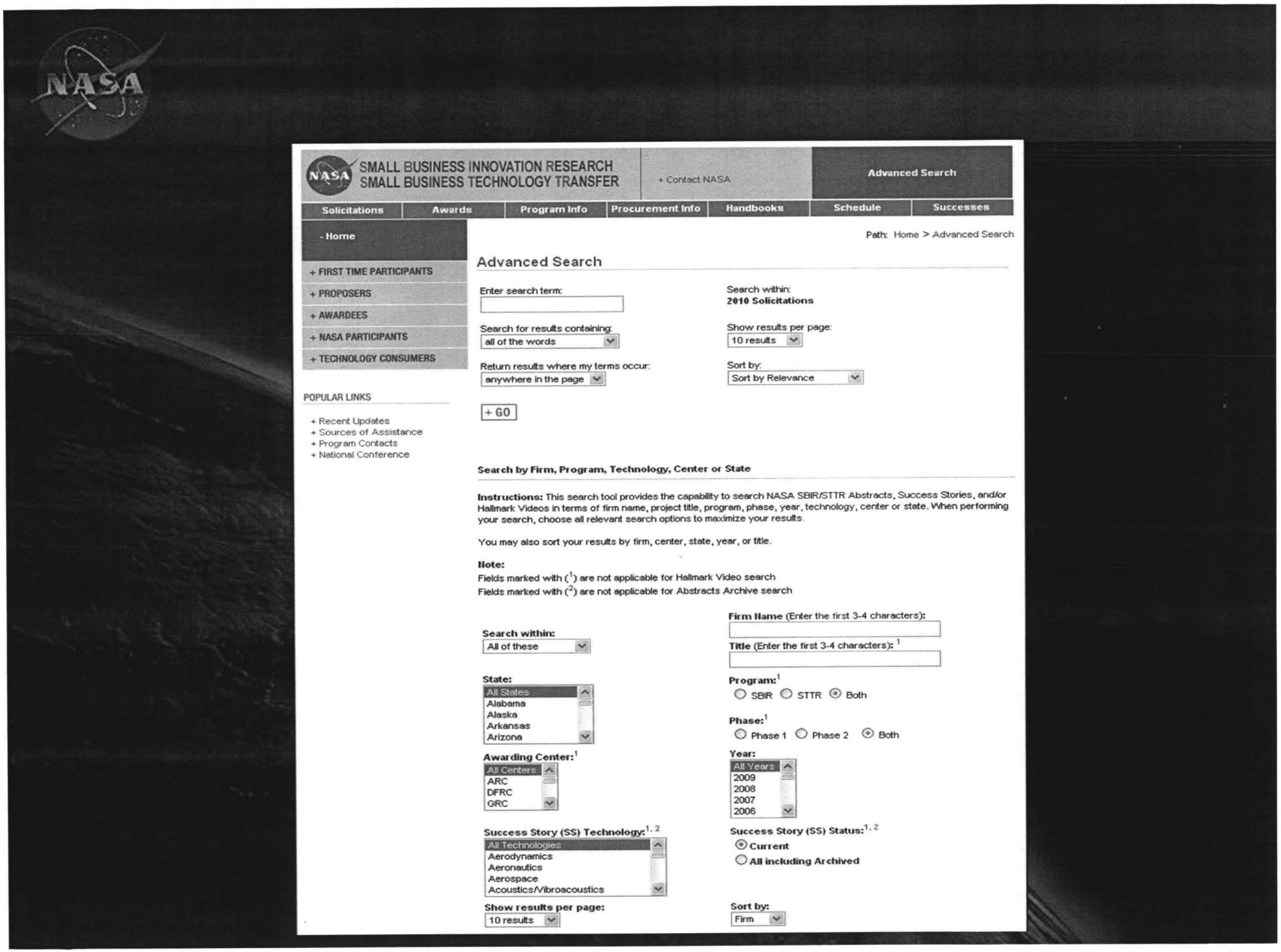
This tool allows you to perform searches on technology keywords or phrases in funded NASA SBIR/STTR projects. In addition to searching the database, this tool also searches relevant documents submitted by the firm. Note: Public access restricted to non-proprietary data only.

TechSource can be used to:

- Identify SBIR/STTR technologies that may solve a NASA or industry need;
- Provide a potential link to investment opportunities for investors and other sources of capital;
- Showcase projects in a particular technology area;
- Identify projects from a specific NASA Center, Firm, or Principal Investigator.

http://sbir.nasa.gov

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+ Recent Updates
+ Sources of Assistance
+ Program Contacts
+ National Conference
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Search for results containing:
all of the words
Show results per page:
10 results
Return results where my terms occur:
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Search by Firm, Program, Technology, Center or State
Instructions: This search tool provides the capability to search NASA SBIR/STTR Abstracts, Success Stories, and/or Hallmark Videos in terms of firm name, project title, program, phase, year, technology, center or state. When performing your search, choose all relevant search options to maximize your results.
You may also sort your results by firm, center, state, year, or title.
Note:
Fields marked with (1) are not applicable for Hallmark Video search
Fields marked with (2) are not applicable for Abstracts Archive search
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State:
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Program: 1
SBIR STTR Both
Phase: 1
Phase 1 Phase 2 Both
Awarding Center: 1
All Centers
ARC
DFRC
GRC
Year:
All Years
2009
2008
2007
2006
Success Story (SS) Technology: 1, 2
All Technologies
Aerodynamics
Aeronautics
Aerospace
Acoustics/Vibroacoustics
Success Story (SS) Status: 1, 2
Current
All including Archived
Show results per page:
10 results
Sort by:
Firm

Environmental Monitoring & Control (example)

X3.03 Monitoring and Control for Spacecraft Environmental Quality and Fire Protection
Lead Center: JPL
Participating Center(s): ARC, GRC, JSC, KSC, MSFC

Monitoring and Control Technology Needs
Long duration human missions far from Earth and operation of closed loop life support systems have critical needs for monitoring and control for environmental quality and certifying recycled life support consumables. Monitoring technologies are employed to assure that the chemical and microbial content of the air and water environment of the astronaut crew habitat falls within acceptable limits, and that the life support system is functioning properly and efficiently. The sensors may also provide data to automated control systems. All proposed technologies should have a 3 year shelf-life, including any calibration materials (liquid or gas). The technologies will need to function in microgravity and low pressure environments (~8 psi), and may see unpressurized storage. Significant improvements are sought in miniaturization and operational reliability, as well as long life, in-line operation, self-calibration, reduction of expendables, low energy consumption, and minimal operator time/maintenance for monitoring and controlling the life-support processes.

- Process control sensors for closed loop life support systems: Targeted sensors include humidity in gases such as O_2, H_2, and CO_2; volatile organic compounds in O_2 and CO_2 (VOCs in CO_2 would be in the CO_2 removal/concentration product that would feed to any CO_2 reduction process); composition of CO_2 reduction effluent gases (CO_2, CO, CH_4, and H_2O) from either a Sabatier- or Bosch-based CO_2 reduction process; and combustible gas sensors for H_2 in an O_2 background and O_2 in an H_2 background from electrolysis.
- Trace toxic metals in water.
- Microbial monitoring of water and surfaces using minimal consumables.
- Optimal system control methods. Operate the life support system with optimal efficiency and reliability, using a carefully chosen suite of feedback and health monitors, and the associated control system.
- Sensor suites. Develop an approach for selecting number, types and placement of sensors in a distributed network for optimal environmental monitoring. Develop an approach to efficiently analyze data from a suite of sensors within a distributed network for optimal environmental monitoring.

Spacecraft Fire Protection Technology Needs
The overheating or combustion of spacecraft materials can introduce many types of particulate and gaseous contaminants into the cabin atmosphere. Technologies that not only detect smoke particulate but identify important characteristics such as particulate size and composition would be extremely useful for rapid identification of the fire source. These must be of suitable size, mass, and volume for a distributed sensor array in spacecraft systems. Also, catalytic or sorbent technologies suitable for the rapid removal of gases, especially CO, and particulate during a contingency response are desired.

Cryogenic Fluid Management (example)

O3.07 Cryogenic Fluid Management Technologies
Lead Center: KSC

The ultimate objective of this Cryogenic Fluid Management (CFM) Technologies solicitation is to demonstrate a variety of critical CFM technologies in a micro-gravity space environment via a deployable or non-deployable test bed.

The initial phase (Phase I) will identify and develop prototype experiments that could be integrated into a universal platform for demonstration of these experiments in their relevant micro-gravity environment.

The second phase (Phase II) of this solicitation would develop a universal and innovative test bed platform that could be launched as a secondary payload on an expendable launch vehicle.

State of the art: CFM technologies are, for the most part, limited to ground tests that do not provide a complete and accurate demonstration of the technologies in their true operational environment. This increases risk in the development of emerging technologies for future applications in the areas of space based propellant depots, low gravity descent and ascent operations, and future space or planetary based architectures.

Areas of interest:

The purpose of these experiments would be to allow testing of:

- Designs for fluid and propellant transfer plumbing
- Multi-layer insulation (MLI) designs
- Various mass gauging designs
- Thermal control and boil-off control designs in a true micro-gravity space environment

Central Industry Assistance Office

The NASA Kennedy Space Center (KSC) Small Disadvantaged Business Working Group has an off-site Central Industry Assistance Office (CIAO) which serves as an outreach to private industry and a primary source of information for firms seeking business opportunities at KSC. One of the primary services offered at the CIAO are:

Joint Counseling Sessions

Allow small businesses to meet with NASA/KSC personnel, including prime contractor representatives to present their products and services.

To schedule an appointment, please call (321) 867-7353.

NASA KSC Technology Capability Areas

KSC is seeking partners in joint technology development projects and technology commercialization in the following areas:

- Storage, Distribution and Conservation of Fluids
- Materials for Life Cycle Optimization
- Life Sciences, Habitation Systems, and Human Research
- Remediation and Ecosystem Sciences
- In-Situ Resource Utilization and Surface Systems
- Life Cycle Optimization of Products, Projects and Programs
- Space Launch and Suborbital Technologies
- Tracking, Timing, Communications (TT&C) and Navigation Technologies

http://www.nasa.gov/offices/oct/home/roadmaps/index.html

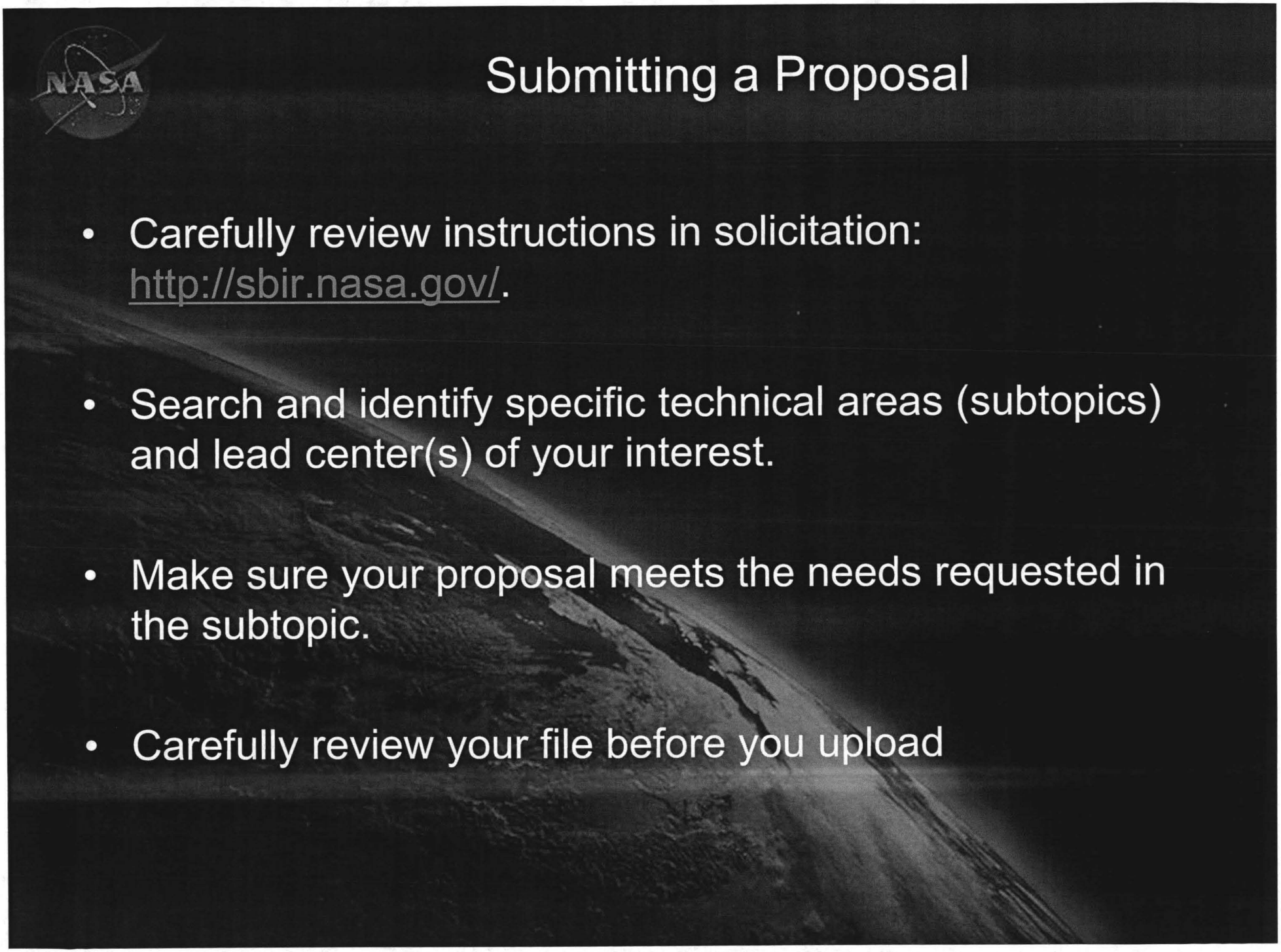
NASA's 14 Space Technology Roadmap Areas

http://www.nasa.gov/offices/oct/home/roadmaps/index.html

Technical Area	Space Technology Roadmaps
• TA01	Launch Propulsion Systems
• TA02	In-Space Propulsion Systems
• TA03	Space Power and Energy Storage
• TA04	Robotics, Tele-Robotics and Autonomous Systems
• TA05	Communication and Navigation Systems
• TA06	Human Health, Life Support and Habitation Systems
• TA07	Human Exploration Destination Systems
• TA08	Science Instruments, Observatories and Sensor Systems
• TA09	Entry, Descent and Landing
• TA10	Nanotechnology
• TA11	Modeling, Simulation, Information Technology and Processing
• TA12	Materials, Structures, Mechanical Systems and Manufacturing
• TA13	Ground and Launch Systems Processing
• TA14	Thermal Management Systems

SBIR/STTR – Eligibility Checkpoints

- Legally established and organized for profit with the place of business located in the U.S.
- Majority owned and controlled by U.S. citizens or permanent resident aliens
- Operated primarily in the U.S. or makes a significant contribution to the U.S. economy
- 500 employees or less, including any affiliates.



Submitting a Proposal

- Carefully review instructions in solicitation: http://sbir.nasa.gov/.
- Search and identify specific technical areas (subtopics) and lead center(s) of your interest.
- Make sure your proposal meets the needs requested in the subtopic.
- Carefully review your file before you upload

Submission Process

- All proposals are submitted electronically via the internet
- Make sure all parts of your proposal are received on time – late proposals are rejected
- Proposals are screened for administrative completeness and turned over to the managing NASA Center for technical review

Phase 1 Proposal Review & Selection Criteria

- Proposal Review
  - Factor 1: scientific/technical merit and feasibility (50%)
  - Factor 2: experience, qualifications and facilities (25%)
  - Factor 3: effectiveness of the proposed work plan (25%)
  - Factor 4: commercial merit and feasibility
- Proposal Ranking and Selection
  - NASA Project/Mission Alignment
  - Value, Priority and Infusion Potentials
  - Innovation & commercial

SBIR/STTR Program Schedule

2012 Program Solicitation

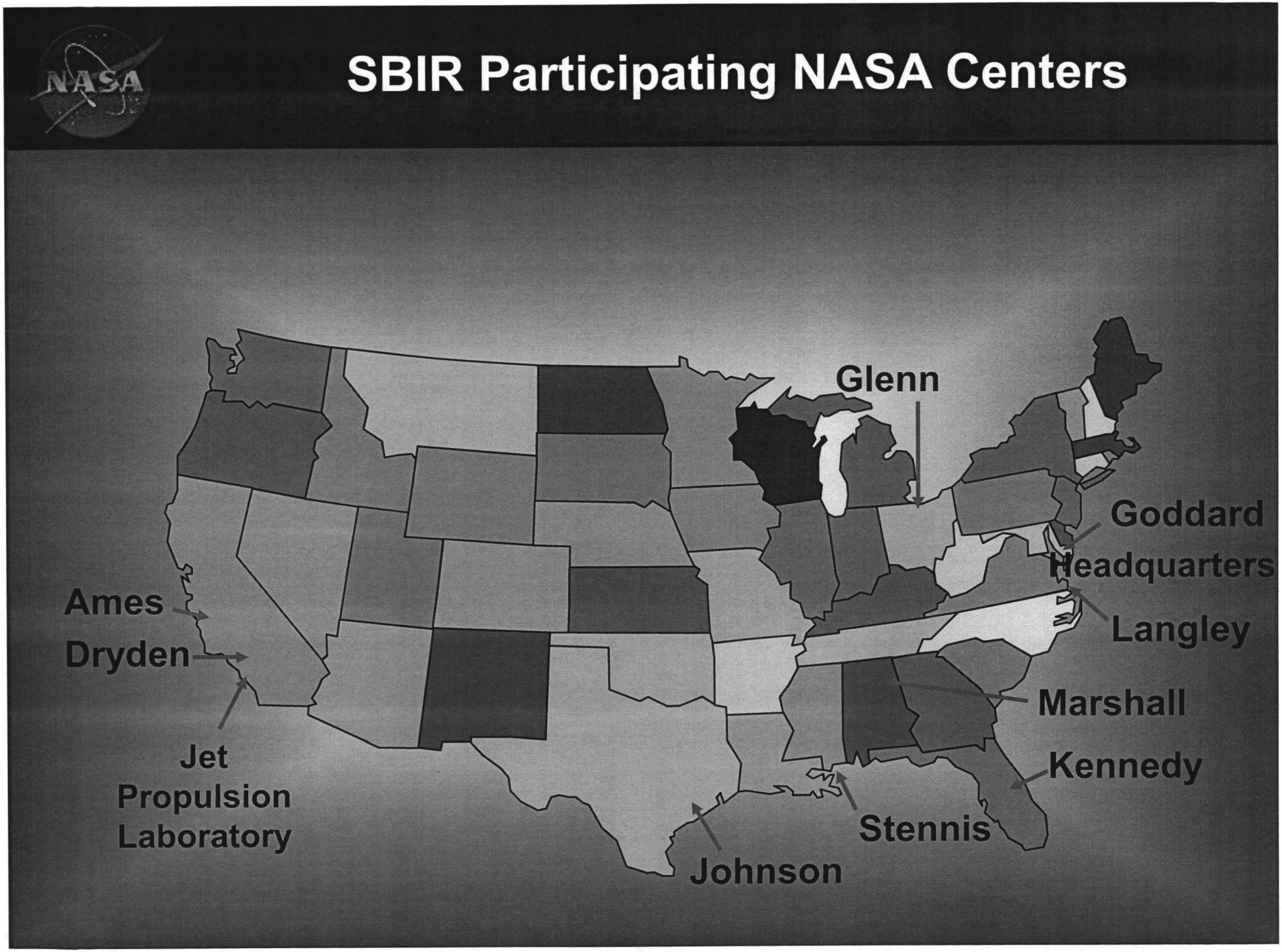
- **Opening Date:** 09/04/2012
- **Closing Date:** 10/08/2012
- **Selections:** January 2013

http://sbir.nasa.gov

NASA SBIR/STTR Help Desk

REI Systems, Inc.
NASA SBIR/STTR Support Office
4041 Powder Mill Road
Suite 311
Calverton, MD 20705
301-937-0888
email: sbir@reisys.com

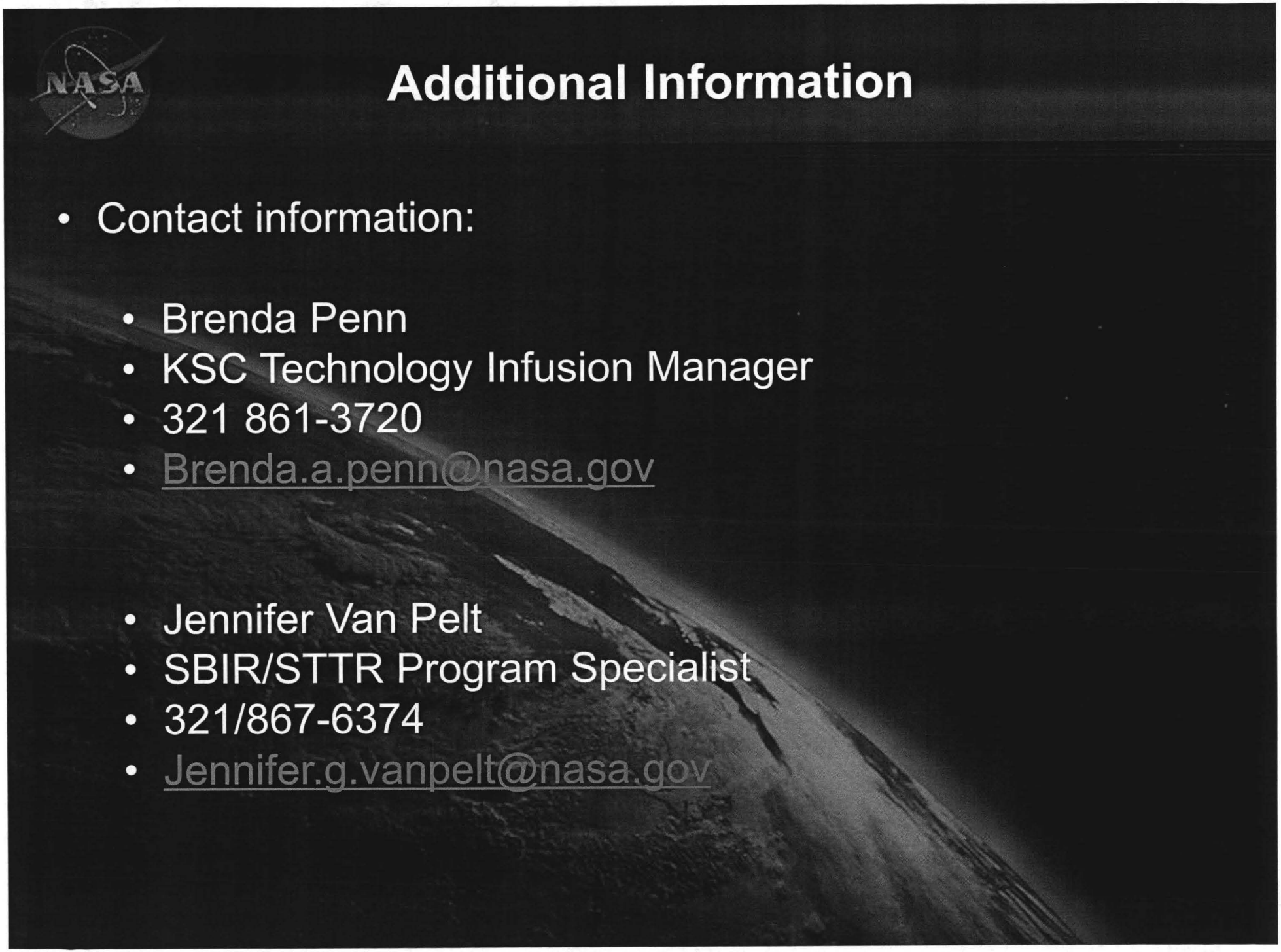
SBIR Participating NASA Centers



Additional Information

- The **NASA SBIR/STTR website (http://sbir.nasa.gov)** contains Solicitations and schedules, along with a wealth of related information. Documents and other information available include: prior award lists, technical abstracts, program statistics, procurement information, and links to state and private assistance organizations.

- The **SBIR/STTR Firm's Library (https://sbir.gsfc.nasa.gov/sbir/firm_library/index.html)** provides specific help in meeting proposal and contract requirements. The Firm's Library offers templates and samples of all potential Phase 1 and Phase 2 deliverables from proposal submissions through the life of the contract. Samples include: proposals, forms for proposals and contract negotiations, cooperative agreements (STTR), briefing charts, and reports. In addition, templates and samples for items such as business plans, briefing charts, and success story documentation are available.



Additional Information

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